#7

SEQUENCE LISTING

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Sharp, Phillip A.
Pabo, Carl O.

<120> Chimeric DNA-binding proteins

<130> APV-022.02

<140> 08/973,131
<141> 1997-11-26

<150> PCT/US95/16982
<151> 1995-12-29

<150> 08/366,083
<151> 1994-12-29

<160> 75

<170> PatentIn Ver. 2.0

<210> 1
<211> 26
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<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 1
gtttggcacc tgactaattt aaggag 26

<210> 2
<211> 25
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 2
gcgttaatta agggaggtaa ggccc 25

<210> 3
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 3
ctcggccgtt aatgaggggt gttcg 25

<210> 4
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 4
taattatggg cgggatcgaa tagcc 25

<210> 5
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 5
ggcaataatc aatcctttaa ttatgg 26

<210> 6
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 6
ggccgtacct catgaaatta ggggcg 26

<210> 7
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 7
gttaattatg gggtaataat ggtgc 25

<210> 8
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 8
gtcgggctct gttaattatg ggtgg 25

<210> 9
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 9
ggataattac gggtggcatt taggc 25

<210> 10
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 10
gataaatagg ggcgtcccat cccgt 25

<210> 11
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 11
taaattaggg ctttaattac ggtc 24

<210> 12
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 12
tcattagagt gttaatgaga tgcgc 25

<210> 13
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 13
tagttgctaa tttgtattaa ttaaag 26

<210> 14
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 14
agttattaat taagaatgtt aatta 25

<210> 15
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 15
gtgtgataat gagctggtcc gtccc 25

<210> 16
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide used to determine the consensus
binding sequence of ZFHD1

<400> 16
atattaaggc gtaattcgga caaga 25

<210> 17
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: consensus binding sequence of ZFHD1

<220>
<223> "n" represents a, t, c, g or other

<400> 17
taattanggg ng 12

<210> 18
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: hybrid DNA site

<220>
<223> "n" represents a, t, c, g or other

<400> 18
aaatnntggg cg 12

<210> 19
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: predicted binding sequence

<220>
<223> "n" represents a, t, c, g or other

<400> 19
cgcccannaa at 12

<210> 20
<211> 10
<212> DNA
<213> human

<400> 20
atgcaaatga 10

<210> 21
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: hybrid binding
site

<400> 21
taatgatggg cg 12

<210> 22
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: hybid binding
site

<220>
<223> "n" represents a, t, c, g or other

<400> 22
ggctgagtct gaacggatcc nnnnnnnnnn nnnnnnnnnn nnnnncctcg agactgagcg 60

tcg 63

<210> 23
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: probe

<400> 23
tcattatggg cg 12

<210> 24
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: probe

<400> 24
cctcgaggtc attatgggcg ctaggtacc 29

<210> 25
<211> 29
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: probe

<400> 25
cctcgaggcg cccatcatta ctaggtacc 29

<210> 26
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: probe

<400> 26
cctcgaggcg cccacgccta ggtacc 26

<210> 27
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: probe

<400> 27
cctcgaggtc atttgcatac taggtacc 28

<210> 28
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA fragment

<400> 28
ggtaccagta tgcaaatgac tgcagtatgc aaatgacctc gag 43

<210> 29
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA fragment

<400> 29
ggtaccaggc gtgggcgctg caggcgtggg cgcctcgag 39

<210> 30
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA fragment

<400> 30
ggtaccagta atgatgggcg ctgcagtaat gatgggcgcc tcgag 45

<210> 31
<211> 18
<212> PRT
<213> human

<400> 31
Asn Phe Leu Gln Leu Pro Gln Gln Thr Gln Gly Ala Leu Leu Thr Ser
1 5 10 15

Gln Pro

<210> 32
<211> 6
<212> PRT
<213> human

<400> 32
Ser Tyr Gly Gln Gln Ser
1 5

<210> 33
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: encoded
epitope

<400> 33
Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
1 5

<210> 34
<211> 306
<212> DNA
<213> human

<400> 34
ctgggggcct tgcttggcaa cagcacagac ccagctgtgt tcacagacct ggcatccgtc 60

gacaactccg agtttcagca gctgctgaac cagggcatac ctgtggcccc ccacacaact 120

gagcccatgc tgatggagta ccctgaggct ataactcgcc tagtgacagg ggcccagagg 180

ccccccgacc cagctcctgc tccactgggg gccccggggc tccccaatgg cctcctttca 240

ggagatgaag acttctcctc cattgcggac atggacttct cagccctgct gagtcagatc 300

agctcc 306

<210> 35
<211> 72
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA fragment

<400> 35
ctagctaatg atgggcgctc gagtaatgat gggcggtcga ctaatgatgg gcgctcgagt 60

aatgatgggc gt 72

<210> 36
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 36
atgctctaga gaacgcccat atgcttgccc t 31

<210> 37
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 37
atgcgcggcc gccgcctgtg tgggtgcgga tgtg 34

<210> 38
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 38
atgcgcggcc gcaggaggaa gaaacgcacc agc 33

<210> 39
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 39
gcatggatcc gattcaacta gtgttgattc ttttttcttt ctggcggcg 49

<210> 40
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 40
tcagtctaga ggagtgcagg tggaaaccat 30

<210> 41
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 41
tcagggatcc tcaataacta gtttccagtt ttagaagctc 40

<210> 42
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 42
actgtctaga gtcagcctgg gggacgag 28

<210> 43
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 43
gcatggatcc gattcaacta gtcccaccgt actcgtcaat tcc 43

<210> 44
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 44
atgctctaga ctgggggcct tgcttggcaa c 31

<210> 45
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 45
gcatggatcc gctcaactag tggagctgat ctgactcag 39

<210> 46
<211> 125
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA construct

<220>
<221> CDS
<222> (12)..(116)

<400> 46
ccgcggccac c atg ctc gac cct aag aag aag aga aag gta ctc gag ggc 50
Met Leu Asp Pro Lys Lys Lys Arg Lys Val Leu Glu Gly
1 5 10

gtg cag gtg gag ctt cta aaa ctg gaa gtc gac tat ccg tac gac gta 98
Val Gln Val Glu Leu Leu Lys Leu Glu Val Asp Tyr Pro Tyr Asp Val
15 20 25

cca gac tac gca ctc gac taagaattc 125
Pro Asp Tyr Ala Leu Asp
30 35

<210> 47
<211> 35
<212> PRT
<213> Artificial Sequence

<400> 47
Met Leu Asp Pro Lys Lys Lys Arg Lys Val Leu Glu Gly Val Gln Val
1 5 10 15

Glu Leu Leu Lys Leu Glu Val Asp Tyr Pro Tyr Asp Val Pro Asp Tyr
20 25 30

Ala Leu Asp
35

<210> 48
<211> 32
<212> DNA
<213> human

<220>
<221> CDS

<222> (6)..(32)

<400> 48
cgagt ctc gag ctt gga acc gga cct gcc gcc 32
Leu Glu Leu Gly Thr Gly Pro Ala Ala
1 5

<210> 49
<211> 9
<212> PRT
<213> human

<400> 49
Leu Glu Leu Gly Thr Gly Pro Ala Ala
1 5

<210> 50
<211> 32
<212> DNA
<213> human

<220>
<221> CDS
<222> (6)..(32)

<400> 50
cgagt ctc gag gtg agc gag gag ctg atc cga 32
Leu Glu Val Ser Glu Glu Leu Ile Arg
1 5

<210> 51
<211> 9
<212> PRT
<213> human

<400> 51
Leu Glu Val Ser Glu Glu Leu Ile Arg
1 5

<210> 52
<211> 32
<212> DNA
<213> human

<220>
<221> CDS
<222> (6)..(32)

<400> 52
cgagt ctc gag gag atg tgg cat gaa ggc ctg 32
Leu Glu Glu Met Trp His Glu Gly Leu
1 5

<210> 53
<211> 9
<212> PRT

<213> human

<400> 53
Leu Glu Glu Met Trp His Glu Gly Leu
1 5

<210> 54
<211> 32
<212> DNA
<213> human

<220>
<221> CDS
<222> (1)..(27)

<400> 54
att ggc tgg tgc cct ttc tgg gtc gac cgagt 32
Ile Gly Trp Cys Pro Phe Trp Val Asp
1 5

<210> 55
<211> 9
<212> PRT
<213> human

<400> 55
Ile Gly Trp Cys Pro Phe Trp Val Asp
1 5

<210> 56
<211> 32
<212> DNA
<213> human

<220>
<221> CDS
<222> (1)..(27)

<400> 56
ttg gct gtg cca gga aca tat gtc gac cgagt 32
Leu Ala Val Pro Gly Thr Tyr Val Asp
1 5

<210> 57
<211> 9
<212> PRT
<213> human

<400> 57
Leu Ala Val Pro Gly Thr Tyr Val Asp
1 5

<210> 58
<211> 32
<212> DNA
<213> human

<220>
<221> CDS
<222> (1)..(27)

<400> 58
ttc cga cga atc tca aag cag gtc gac cgagt 32
Phe Arg Arg Ile Ser Lys Gln Val Asp
1 5

<210> 59
<211> 9
<212> PRT
<213> human

<400> 59
Phe Arg Arg Ile Ser Lys Gln Val Asp
1 5

<210> 60
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA construct

<220>
<221> CDS
<222> (6)..(29)

<400> 60
cgaca ctc gag gcc ccc ccg acc gat gtc 29
Leu Glu Ala Pro Pro Thr Asp Val
1 5

<210> 61
<211> 8
<212> PRT
<213> Artificial Sequence

<400> 61
Leu Glu Ala Pro Pro Thr Asp Val
1 5

<210> 62
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA construct

<220>
<221> CDS
<222> (1)..(21)

<400> 62
gac gag tac ggt ggg gtc gac tgtcg 26
Asp Glu Tyr Gly Gly Val Asp
1 5

<210> 63
<211> 7
<212> PRT
<213> Artificial Sequence

<400> 63
Asp Glu Tyr Gly Gly Val Asp
1 5

<210> 64
<211> 161
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA construct

<220>
<221> CDS
<222> (12)..(152)

<400> 64
ccgcggccac c atg ctc gac cct aag aag aag aga aag gta ctc gag gag 50
Met Leu Asp Pro Lys Lys Lys Arg Lys Val Leu Glu Glu
1 5 10

atg tgg cat gaa cga atc tca aag cag gtc gag gcc ccc ccg acc gat 98
Met Trp His Glu Arg Ile Ser Lys Gln Val Glu Ala Pro Pro Thr Asp
15 20 25

gac gag tac ggt ggg gtc gac tat ccg tac gac gta cca gac tac gca 146
Asp Glu Tyr Gly Gly Val Asp Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
30 35 40 45

ctc gac taagaattc 161
Leu Asp

<210> 65
<211> 47
<212> PRT
<213> Artificial Sequence

<400> 65
Met Leu Asp Pro Lys Lys Lys Arg Lys Val Leu Glu Glu Met Trp His
1 5 10 15

Glu Arg Ile Ser Lys Gln Val Glu Ala Pro Pro Thr Asp Asp Glu Tyr
20 25 30

Gly Gly Val Asp Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Leu Asp
35 40 45

<210> 66
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 66
tcagtctaga tgtaacatat gccagaaagc cttc 34

<210> 67
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 67
tcagtctaga tgcaaggagt gtggaaaaac cttt 34

<210> 68
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 68
tcagtctaga tgtcatgagt gtgggaaagc cttt 34

<210> 69
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 69
tcagggatcc tcaataacta gtagccagtt tgtctttgtg gtgata 46

<210> 70
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 70
tcagtctaga cataagaaag tcctctctag 30

<210> 71

<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 71
tcagggatcc tctatatcaa ctagtaggct tctcaccaag atgg 44

<210> 72
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 72
tcagggatcc tctatatcaa ctagtgggct cctcctgact gtg 43

<210> 73
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 73
tcagtctaga ggccggagcc tgctggagt 29

<210> 74
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 74
tcagggatcc tcaataacta gtgtaggatt tgaggaggga a 41

<210> 75
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: chimeric motif

<400> 75
Arg Thr His Thr Gly Gly Gly Arg Arg Arg Lys Lys Arg Thr
1 5 10